

The effect of nitrate nitrogen and salicylic acid on aerenchyma formation in typha angustifolia grown in mesocosms

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Abstract

Macrophytes play a significant role in the functioning of hydroecosystems. Their activities include changes at the physiological and anatomical levels toward the action of various pollutants. This study was intended to reveal some features in aerenchyma formation in roots of *Typha angustifolia* exposed to various concentrations of nitrate nitrogen and salicylic acid. It was found that the resistance of *T. angustifolia* to nitrate nitrogen is mediated by redistribution of aerenchyma formation in the root system. The action of salicylic acids results in decreasing influence of nitrate nitrogen in two types of adventitious roots. Features of aerenchyma formation in the soilborne roots and aquatic ones were different. © 2011.

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Keywords

Aerenchyma, Macrophyte, Nitrate nitrogen, Salicylic acid, *Typha angustifolia* L